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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/004,854	12/07/2001	Seong Soo Park	P67382US0	9663
43569	7590	04/05/2006	EXAMINER	
MAYER, BROWN, ROWE & MAW LLP 1909 K STREET, N.W. WASHINGTON, DC 20006			SHAH, CHIRAG G	
			ART UNIT	PAPER NUMBER
			2616	

DATE MAILED: 04/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/004,854

Applicant(s)

PARK ET AL.

Examiner

Chirag G. Shah

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-12 is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 5 is/are rejected.
- 7) ☒ Claim(s) 3, 4, 6 and 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/07/01 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 2/23/06 have been fully considered but they are not persuasive. Regarding claim 1, Applicant argues that Park '274 merely discloses a system where the radio network and the mobile station coupled to the core network are asynchronous, which the core networks are mixed, while claim 1 is directed to a hand-off method between an asynchronous radio network coupled to an asynchronous core network and a synchronous radio network coupled to a synchronous core network. Examiner respectfully disagrees and redirects Applicant to Park '274 reference, specifically to col. 13, lines 35-40 and col. 6, lines 58-65. Park '274 clearly establishes the hybrid type asynchronous mobile station comprises layer 1, which includes synchronous CC part, synchronous MM part, an asynchronous CC part, an asynchronous MM part and asynchronous RRC part and selectively activates a synchronous CC/MM protocol or an asynchronous CC/MM protocol. This clearly signifies that inter-system handover is capable of directing between an asynchronous radio network coupled to an asynchronous core network and a synchronous radio network coupled to a synchronous core network.

Applicant further argues that the combination of Park '274 and Park '581 fails to teach or suggest a method of supporting hand-off determination for guaranteeing mobility of a dual-mode terminal in a mixed communication network in which a synchronous and an asynchronous network system coexist, the dual-mode terminal being capable of accessing both the synchronous and the asynchronous network system that includes in constructing information on adjacent cells,

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which are selectively included based on the received terminal capability information, of the dual-mode terminal, and providing the dual-mode terminal with the constructed adjacent cell information, at the side of the mixed communication network as recited in claim 1. Examiner respectfully disagrees and redirects Applicant to Applicant's specification page 9, lines 3-5, where it clearly states that according to the IMT-2000 system as used in Park' 581 invention, see fig. 1A-1D, a mobile station delivers information of its supportable service capability to a communication network through a UE capability message. Furthermore, since Park' 581 discloses in fig. 3 of mobile station selectively communicating with asynchronous base station 310, thus suggesting that the UE capability message is received by the asynchronous base station 310. The asynchronous base station 310 via reception unit 330 obtains information associated with the neighboring synchronous base station 320. The information includes a neighbor list, a long code state, time related information such as an absolute time of the synchronous base station and the like. Thus as disclosed in col. 5, lines 1-9, in performing a handoff from the asynchronous base station 310 to the synchronous base station 320, the asynchronous mobile station being aware of the mobile's service capability based on IMT-2000 specification transmits the constructed time related information and the neighbor list to the dual-mode station 300. Therefore, based on the clarification provided claims 1, 2 and 5 are respectfully properly rejected under 35 U.S. C. 103(a) over Park '274 in view of Park '581.

2. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 2, and 5 rejected under 35 U.S.C. 103(a) as being unpatentable over Park et al. (U.S. Patent No. 6,782,274), hereinafter referred as Park in view of Park et al. (U.S. Patent No. 6,704,581), hereinafter referred as Lee.

Regarding claim 1, Park discloses in combination of **fig. 3D and col. 9, lines 5-27, col. 13, lines 35-40 of a hybrid type of synchronous and asynchronous mobile stations for transmitting radio resource messages and inter-system handover commands messages for mobility in a mixed communication network being capable of accessing both the synchronous and asynchronous network systems, comprising the steps of.**

(a) transmitting information of terminal capability [**mobile station transmits UE Capability Information message during a RRC connection request, see col. 11, lines 48-54 and col. 12, line 8-14**] operable in both the synchronous and the asynchronous network system to the mixed communication network [see, col. 13, lines 35-40, 49-62, intersystem handover command message from one radio system to another includes UE (capability) information for transmitting a capability of UE (hybrid (synchronous and asynchronous) capability type mobile station, see fig. 3D)], irrespective which network system a present service area belongs at the side the dual-mode terminal [see fig. 3B&3D and col. 9, lines 6-26, irrespective of the network system the hybrid mobile belongs to, RRC connection message includes UE capability of the mobile is transmitted to the radio network]; and

Park explicitly fails to disclose the step of constructing information on adjacent cells, which are selectively included based on the received terminal capability information, of the dual-mode terminal, and providing the dual-mode terminal with the constructed adjacent cell information, at the side of the mixed communication network.

According to the IMT-2000 system specification used in Lee's invention, see fig. 1A-1D, a mobile station delivers information of its supportable service capability to a communication network through a UE capability message. Lee discloses in fig. 3 of a dual-mode mobile station 300 selectively communicating with asynchronous base station 310. The asynchronous base station 310 via reception unit 330 constructs neighboring list via communication with the synchronous base station 320. Lee further discloses in col. 5, lines 1-9, when performing a handoff from the asynchronous base station 310 to the synchronous base station 320, the asynchronous base station 310 transmits the constructed time related information, the neighbor

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list and the long code state to the dual-mode station 300 communicating with the asynchronous base station 310, upon the asynchronous base station being aware of the mobile's service capability based on IMT-2000 specification.

Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to modify the teachings of Park to include the features of providing the dual-mode terminal with the constructed neighboring cell information in a IMT-2000 system as taught by Lee. **One is motivated as such in order to perform a handoff from an asynchronous base station to a synchronous base station by using information associated with a neighboring synchronous base station, thereby avoiding an undesirable breaking of communication** (*Lee, col. 2, lines 56-65*).

Regarding claim 2, Park discloses wherein the step (a) inserts information of terminal capability operable in the synchronous network system in an originating message including a protocol revision (P_REV, see claim 1) number **[in order for the asynchronous mobile station to interface with the synchronous core network, the RRC message must include/insert information fields related to the synchronous core network and information fields necessary for synchronization, i.e., RRC message includes/inserts UE terminal capability message having information element related to a core network inserted with a network id, system id and a protocol id, see col. 13, lines 49-62, col. 15, lines 54-57, col. 16, lines 39-46, and claim 1]**, if the dual-mode terminal is operative in service area of the asynchronous network system **[mobile station is operative in the asynchronous network system, see col. 13, lines 49-62]**. *Park fails to explicitly disclose the example of when the mobile station is operative in*

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the synchronous network system, inserting the terminal capability including a protocol revision number operable in the asynchronous network system.

Since it is disclosed in combination of col. 13, lines 35-62, col. 15, lines 54-57, col. 16, lines 39-46, and claim 1 an example of inter-system handover, where, the mobile station is operative in asynchronous network system, and protocol revision number is inserted along with synchronous core network information in the RRC message, this suggests a similar example may be established for an inter-system handover between a mobile station operative in a synchronous network system, inserting protocol revision number along with asynchronous network information in the RRC message. This enables a synchronous mobile station to interface with the asynchronous network, providing another example of inter-system handover.

Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to modify the teachings of Park's example of inter-system handover to include a synchronous mobile station inserting in the RRC message a protocol revision operable in the asynchronous network. **One is motivated as such in order for the mobile station operative in one system (synchronous) to start a handover to another (synchronous) radio system (Park, col. 13, lines 35-55).**

Regarding claim 5, Park discloses wherein the step (a) inserts information of terminal capability operable in the synchronous network system in an originating message including a protocol revision (P_REV, see claim 1) number **[in order for the asynchronous mobile station to interface with the synchronous core network, the RRC message must include/insert information fields related to the synchronous core network and information fields**

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necessary for synchronization, i.e., RRC message includes/inserts UE terminal capability message having information element related to a core network inserted with a network id, system id and a protocol id, see col. 13, lines 49-62, col. 15, lines 54-57, col. 16, lines 39-46, and claim 1], if the dual-mode terminal is operative in service area of the asynchronous network system [mobile station is operative in the asynchronous network system, see col. 13, lines 49-62].

Allowable Subject Matter

5. Claims 8-12 allowed.

Prior Art fails to disclose the steps of checking, based on the received terminal capability information, whether or not the dual-mode terminal can access the asynchronous network system and synchronous network system respectively and sending information of adjacent cells of the asynchronous network system to the dual-mode terminal if accessible, at the side of a first and second controller respectively installed in the synchronous and asynchronous network systems respectively.

6. Claims 3, 4, 6 and 7 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

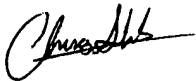
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chirag G. Shah whose telephone number is 571-272-3144. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on 571-272-7682. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

cgs
March 20, 2006



Chirag Shah
Patent Examiner, Division 2616